

Length:

W/O lifting
 plug ----- 34.14 in.
 W/lifting plug ---- 37.23 in. (max)
 Cannon (Weapon)
 used with ----- M113, M113A1
 Body material ----- Forged steel

M437A1 w/
 Supplementary
 Charge 1320-
 D591 (M437A1,
 M437A2 without
 supplementary
 charge)

Assembly Dwg No ----- 8837902

2-114 Change 7

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TM 43-0001-28

Ballistics: (M113 and M113A1 Cannons)

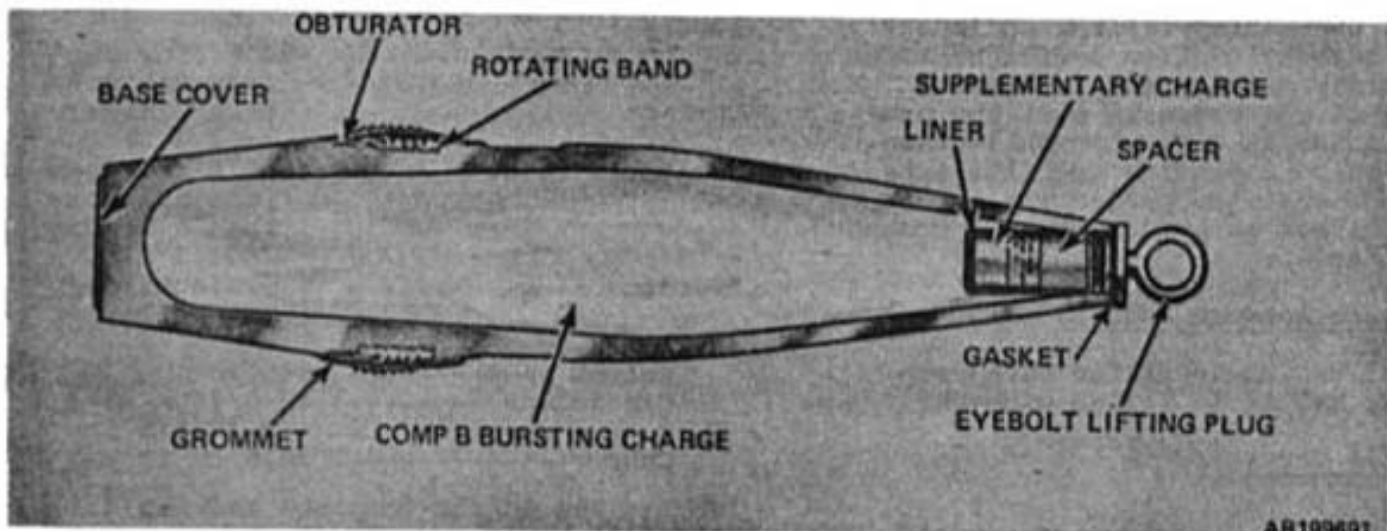
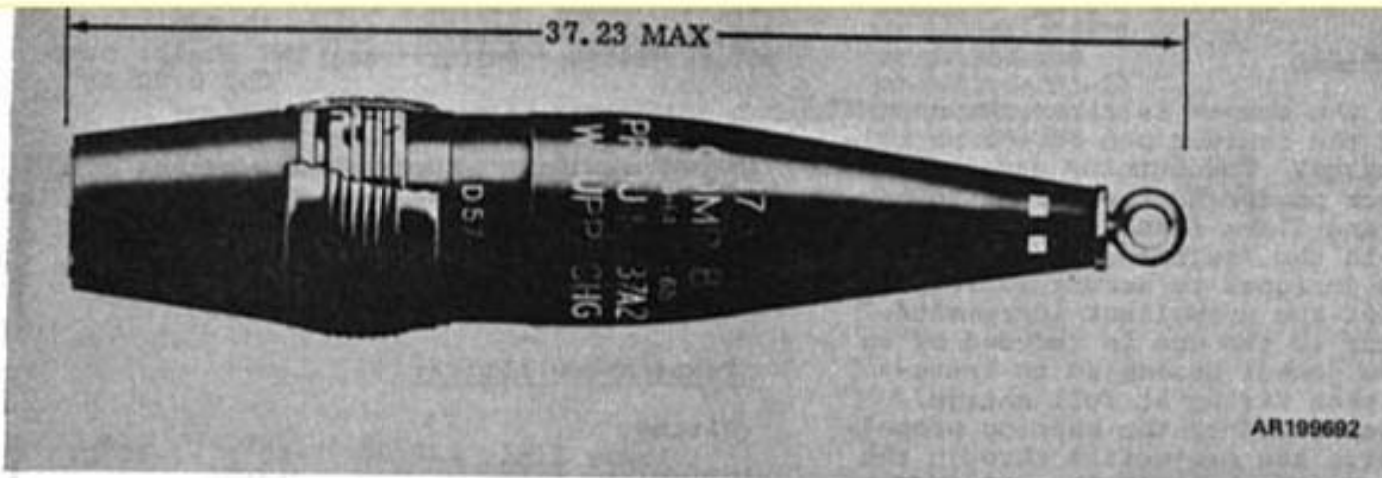
Charge	Muzzle Velocity (fps)	Maximum Range (yd)	Maximum Range (mtr)	Chamber Pressure (psii)
M86				
1	1675	16,315	15,100	10,100
2	2310	24,200	22,100	20,200
3	3000	35,800	32,700	45,700

*When firing M86 series Propelling Charge at Zone 1 in a cold weapon expect the muzzle velocity to exceed the service

velocity (1,675 fps) by up to 100 fps resulting in extended range.

References:

- SC 1305/30-IL
- DARCOM-P 700-3-3
- TM 9-1300-216-10
- TM 9-1300-206
- TM 9-1300-251-20
- TM 9-1300-251-34
- TM 9-1300-250



Type Classification:

M437A2: Std AMCTC 3089 dtd 1965

M437A1: Std AMCTC 3089 dtd 1965

Use:

These 175mm HE Projectiles M437A2 and M437A1 are high explosive rounds for the 175mm Gun Cannon M113 used for fragmentation, blast, and mining in support of ground troops and armored columns.

Description:

The projectile consists of a hollow steel forging with a boattailed base, a streamlined ogive, a gilding metal

rotating band, and a nylon obturating band. A base cover is welded to the base of the projectile for added protection against the entrance of hot gases from the propelling charge during firing. The nose of the projectile is fitted with a threaded eyebolt lifting plug to facilitate handling and provide a closure for the fuze cavity. The projectile is made with a deep fuze cavity and may be loaded with TNT or Composition B. Deep cavity projectiles contain a supplementary charge in the fuze cavity. A cardboard spacer is placed in the fuze cavity between the supplementary charge and the lifting plug to limit movement of the supplementary charge during shipping and handling. The rotating band is protected by a removable grommet. The

loaded projectile is zoned into one of four weight zones ranging from 142.75 to 147.23 pounds. The weight zone of the projectile is indicated by the number of prick punch marks on the ogive of the projectile.

Functioning:

When the weapon is fired, Primer M82 ignites the igniter pad of the propelling charge. The burning pad ignites the black powder in the core assembly. Sparks and flame flash through perforations in the igniter core tubes in a pattern designed to assure uniform ignition of the propellant increments. Bore wear in the gun is reduced by an additive jacket assembled to Increment 3 when firing at full charge. Gases generated by the burning propellant force the projectile through the gun tube with the velocity required to reach the target. The rotating band engages the barrel rifling to impart spin for stabilization in flight. The obturating band expands to prevent leakage of gas pressure past the projectile, and is discarded on leaving the weapon. Depending upon the type fuze employed, the projectile is detonated either on impact or on approach to the target.

Difference Between Models:

Model M437A2 is filled with Comp B; Model M437A1 is filled with TNT.

Tabulated Data:

Projectile:

Type ----- HE
 Weight Zone Information:
 WEIGHT ZONE
 LOADED PROJECTILE (W/O FUZE)

Zone	Over lb	Up To & Incl	Marking
1	142.75	143.96	□
2	143.84	145.05	□ □
3	144.93	146.14	□ □ □
4	146.02	147.23	□ □ □ □

Length:

W/O lifting
 plug ----- 34.14 in.
 W/lifting plug ---- 37.23 in. (max)
 Cannon (Weapon)

Color ----- Olive drab w/
 yellow mark-
 ings
 Filler and weight:
 M437A2 ----- Comp B 31 lb;
 Supp Chg 0.30
 lb TNT
 M437A1 ----- TNT 30 lb; Supp
 Chg 0.30 lb
 TNT

Components:
 Propelling charge - M86 series
 Primer ----- M82
 Fuzes ----- PD,M572;M739,
 MTSQ,M582
 prox,M728,
 M732

Temperature Limits:

Firing:
 Lower limit ----- -40°F (-40°C)
 Upper limit ----- +125°F -
 (+52.0°C)
 Storage:
 Lower limit ----- -80°F (for per-
 iods not more
 than 3 days)
 (-62.2°C)
 Upper limit ----- +160°F (for per-
 iods not more
 than 4 hr/day)
 (+71.1°C)
 *Packing ----- 6 projectiles
 per pallet
 *Pallet:
 Weight ----- 948 lb
 Dimensions ----- 42-3/16 x 25-5/8
 x 17-1/8 in.
 Cube ----- 10.6 cu ft

*NOTE: See SC for complete packing data including NSN's.

Shipping and Storage Data:

Quantity-distance
 class ----- (21) 1.1
 Storage compatibility
 group ----- D
 DOT shipping class A
 DOT designation ----- EXPLOSIVE PRO-
 JECTILE
 DODAC ----- 1320-D572
 (M437A2,
 M437A1) w/
 Supplementary
 Charge 1320-
 D591 (M437A1,
 M437A2 without